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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/694,411 | 10/23/2000 | Dee Gardiner | T9180 | 9053 |

7590 02/07/2006

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| EXAMINER |
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VO, CLIFF N

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| ART UNIT | PAPER NUMBER |
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2676

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/694,411

Applicant(s)

GARDINER ET AL.

Examiner

CLIFF N. VO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-14 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,15,17-20,22 and 23 is/are rejected.
- 7) ☒ Claim(s) 2,5-9,16 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office action is in response to the Amendment filed August 16, 2005 which has been entered into the record of file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 3-4, 15, 17-20 and 22-23 is rejected under 35 U.S.C. 102(e) as being anticipated by Kajiva et al (U.S. Patent No. 5,864,342).

As per claims 1 and 20, Kajiva et al teach a method and system for rendering graphical objects to image chunks utilizing a single pixel frame buffer (col.6, lines 15-19, i.e., "single rasterization buffer") comprising a step of dividing a geometry buffer into a plurality of screen bins (col.10, lines 35-42, i.e., chunks), a step of storing primitives in each screen bin containing a portion of the primitive (col.15, lines 59-64 and col.16,

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lines 1-2), a step of rendering the screen bins, by row from top to bottom, into the pixel frame buffer (col.8, lines 45-49; col.41, lines 22-27) and a step of displaying at least one rendered screen bin before the rendering of all the screen bins has completed for the single pixel frame buffer (col.6, lines 15-29; col.60, lines 24-47, 63-67 and col.61, lines 11-13).

As per dependent claims 3 and 22, Kajiya et al further teach a step of initiating the displaying of the screen bins rendered after at least one row of screen bins has completed rendering (col.61, lines 11-13).

As per dependent claims 4 and 23, Kajiya et al further teach a step of using a hardware interlock to ensure that the rendering step does not advance of the display step (Fig.22, 748).

Claims 15 and 17 are the system claims which perform those steps cited in the method claims 1 and 3, respectively, thus they are rejected under a similar rationale.

As per dependent claim 18, Kajiya et al further teach the claimed features at col.15, lines 59-67.

As per dependent claim 19, Kajiya et al further teach the claimed features at col.61, lines 5-13).

Response to Arguments

4. Applicant's arguments filed 8/16/2005 have been fully considered but they are not persuasive. The Applicant argues in his remark section that the cited prior art fails to teach the features as now claimed by stating "the prior art does not teach or suggest using a single pixel frame buffer". The examiner respectfully disagrees with this

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argument because Kajiya et al do teach a method and system for rendering graphical objects to image chunks utilizing a single pixel frame buffer at col.6, lines 15-19, i.e., "a single rasterization buffer". Even though, the cited prior art does teach using a double frame buffer; however, taking it as a whole, the cited reference, Kajiya et al, does teach utilizing a single pixel frame buffer as now claimed at col.6, lines 15-19. Furthermore, the Applicant argues that "while Applicant claims an entire single pixel frame buffer without additional double buffering" (page 3 of the remark section, last paragraph) and "Kajiya et al does not disclose a remedy for overloading by controlling of the start of rendering with respect to the start of displaying" (page 4 of the remark section, first paragraph). However, there is no where in the claims that the examiner can find these limitations. Accordingly, the examiner believes that the rejection to claims under 35 U.S.C. 102(e) is still proper.

Allowable Subject Matter

5. Claims 10-14 are allowed.
6. Claims 2, 5-9, 16 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within


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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLIFF N. VO whose telephone number is 571-272-7651. The examiner can normally be reached on 2nd Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

CLIFF N VO
Examiner
Art Unit 2676

